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April 5, 2001

**Via Hand Delivery**

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
The Portals  
445 Twelfth Street, S.W.  
Room TW-B204  
Washington, D.C. 20554

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**APR 5 2001**

**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**

**Re: ET Docket No. 98-206; RM-9147; RM-9245; Applications of Broadwave USA et al., PDC Broadband Corporation, and Satellite Receivers, Ltd., to provide a fixed service in the 12.2-12.7 GHz Band**

Dear Ms. Salas:

Enclosed for filing please find an original and four copies of the *Reply Comments of Northpoint Technology, Ltd., and Broadwave USA, Inc.* in the above-captioned matter.

I have enclosed an additional copy for date-stamp and return in the self-addressed envelope provided. Thank you for your assistance in this matter.

Yours sincerely,

  
J. C. Rozendaal

Enclosure

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FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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APR 5 2001

FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )  
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Amendment of Parts 2 and 25 of the )  
Commission's Rules to Permit Operation of )  
NGSO FSS Systems Co-Frequency with )  
GSO and Terrestrial Systems in the Ku-Band )  
Frequency Range; )  
)  
Amendment of the Commission's Rules to )  
Authorize Subsidiary Terrestrial Use of the )  
12.2-12.7 GHz Band by Direct Broadcast )  
Satellite Licensees and Their Affiliates; and )  
)  
Applications of Broadwave USA, PDC )  
Broadband Corp., and Satellite Receivers, )  
Ltd., to Provide a Fixed Service in the 12.2- )  
12.7 GHz Band )  
\_\_\_\_\_)

ET Docket No. 98-206  
RM-9147  
RM-9245

**REPLY COMMENTS OF NORTHPOINT TECHNOLOGY, LTD.,  
AND BROADWAVE USA, INC.**

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April 5, 2001

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**REPLY COMMENTS OF NORTHPOINT TECHNOLOGY, LTD.,  
AND BROADWAVE USA, INC.**

**INTRODUCTION AND SUMMARY**

“[E]very invention is born into an uncongenial society, has few friends and many enemies.”<sup>1</sup> As the comments received in response to the Commission’s *First Report and Order and FNPRM*<sup>2</sup> demonstrate, this maxim applies with full force to the innovative

<sup>1</sup> Joel Mokyr, *The Lever of Riches* 183 (1990).

<sup>2</sup> First Report and Order and Further Notice of Proposed Rule Making, *Amendment of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, ET Docket No. 98-206, FCC 00-418, ¶ 327 (rel. Dec. 8, 2000) (“*First Report and Order and FNPRM*”).

technology that Northpoint has developed to harvest new bandwidth out of already licensed spectrum in the 12 GHz band. Many of the commenters want to bury Northpoint's technology; others want to grab it for themselves.

Of the 18 sets of comments submitted in addition to Northpoint's opening comments, five are from satellite operators or their allies who continue to oppose the Commission's decision to allow ubiquitous terrestrial sharing of the 12 GHz band. Interestingly, all of these parties who think there should be no terrestrial service also want the right to bid at auction for licenses to provide the very terrestrial service that they claim would cause ruinous interference with their satellite transmissions.<sup>3</sup> Three other entrenched MVPD distributors, including AT&T, the nation's largest cable system operator, likewise support auctions and oppose issuing Northpoint licenses to provide terrestrial service that would compete with theirs. For all these companies, auctions represent a means of delaying the start of terrestrial service in the 12 GHz band, perhaps indefinitely. The Commission should regard their support of auctions with appropriate suspicion.

Several more commenters who favor auctions are would-be terrestrial operators<sup>4</sup> who want to appropriate Northpoint's technology and regulatory efforts for their own benefit. None of these free riders participated in the initial rulemaking proceedings regarding terrestrial use of the 12 GHz band that the Commission initiated at Northpoint's request. None of them submitted an application in the relevant filing window. None of them has provided technology to the MITRE Corporation for testing,

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<sup>3</sup> EchoStar even proposes that most of the spectrum be given to incumbent DBS operators free of charge and without an auction.

as required by statute. In short, none of them has proven to the Commission that it is capable of sharing the 12 GHz band ubiquitously with up to 10 distinct DBS and NGSO-FSS operations.

The Commission has invested years in evaluating and approving Northpoint's technology and has determined that Northpoint is capable of providing ubiquitous terrestrial service in the 12 GHz band without causing harmful interference to existing or planned satellite uses. Congress ordered the Commission to issue licenses months ago for the kind of service Northpoint is proposing.<sup>5</sup> Northpoint is not seeking special treatment, and it is not seeking a departure from the Commission's usual practice for granting licenses in this band. Northpoint simply asks that the Commission process Northpoint's pending license and waiver applications together with those of the NGSO-FSS applicants and issue all these licenses promptly, without an auction.

## **DISCUSSION**

### **I. THE COMMISSION SHOULD NOT AUCTION OFF LICENSES FOR TERRESTRIAL SERVICE IN THE 12 GHZ BAND**

Northpoint recognizes that auctions are often an appropriate and efficient way to compensate the Government for making spectrum available and to ensure that spectrum gets into the hands of those parties who can make the best use of it. Auctions are inappropriate in the present case, however, because the Commission has *not* made any new spectrum available for which it ought to expect compensation. Instead, Northpoint's

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<sup>4</sup> SkyTower, which actually proposes sub-orbital stratospheric operations, is here treated as a terrestrial operator.

<sup>5</sup> See Rural Local Broadcast Signal Act ("RLBSA"), Pub. L. No. 106-113, § 1000(a)(9), [App. I, Tit. II], 113 Stat. 1501, 1536, 1501A-544 (1999) (enacted on November 29, 1999, as Title II of the Intellectual Property and Communications Omnibus Reform Act of 1999 ("IPACORA")).

technology expands the bandwidth available in spectrum that the Commission has *already allocated and assigned*. Moreover, only Northpoint has proven itself capable of sharing the 12 GHz band ubiquitously with satellite operators. Indeed, the Commission's decision to authorize new terrestrial service in the 12 GHz band is based entirely upon Northpoint's demonstration that more efficient use of band is possible without causing harmful interference to incumbents. As discussed in more detail in Northpoint's opening comments and in the declaration of former FCC chief economist Thomas W. Hazlett, the long-run effect of subjecting Northpoint to an auction would be to crush the incentives for entrepreneurs and inventors to develop innovative technologies to create bandwidth in already licensed spectrum.<sup>6</sup>

Nevertheless, several commenters suggest that the Commission should ignore Northpoint's pending license applications and instead open a new filing window for competing terrestrial applications (while allowing NGSO-FSS licenses to be issued without competitive bidding).<sup>7</sup> This suggestion betrays a misunderstanding of the procedural and substantive law bearing on the management of the 12 GHz band. In this regard, it bears repeating that the fundamental purpose of Northpoint's technology is to make possible the coordinated reuse of *satellite spectrum*.

When SkyBridge, L.L.C. ("SkyBridge") sought permission to use spectrum in the 10.7-12.7 GHz band for fixed satellite service, the Commission issued a Notice of Proposed Rulemaking addressing not only SkyBridge's petition but also Northpoint's

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<sup>6</sup> See Northpoint Comments at 9; Hazlett Decl. (App. 1 to Northpoint Comments) ¶¶ 14-18.

<sup>7</sup> See EchoStar Comments at 22-24, 29; SkyTower Comments at 3-4; AT&T Comments at 4-10; DirecTV Comments at 33-34; SBCA Comments at 9-12; Boeing Comments at 38-40.

petition for terrestrial service sharing the 12.2-12.7 GHz portion of the spectrum.<sup>8</sup> From the very beginning, then, terrestrial use of the 12 GHz band has been inextricably linked to NGSO-FSS use of the spectrum as a regulatory matter as well as a practical one. Accordingly, when the Commission issued its November 1998 *Ku-Band Cut-Off Notice* stating that applications for licenses to be considered concurrently with SkyBridge's application were due by January 8, 1999, it put not only NGSO-FSS applicants but also terrestrial applicants (and stratospheric or any other kind of user) on notice as well.<sup>9</sup> The failure of anyone but Northpoint to submit a license application by the January 8 deadline is a sufficient reason to deny any would-be competing application.

This deadline was not an empty procedural formality; it helped ensure that anyone wanting to share spectrum with the up to 10 existing and planned satellite users would be present to work out a sharing regime before the Commission and to demonstrate that the shared use would not result in harmful interference. Had the Commission not considered Northpoint together with the eight contemporaneous NGSO-FSS applicants in proceedings before the International Bureau ("IB"), it would have been impossible to conduct the detailed and complicated dialogue between the Commission and all the applicants that was needed to ensure that all of the more than 10 proposed operations could share the 12 GHz band.

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<sup>8</sup> See Notice of Proposed Rulemaking, *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range; Amendment of the Commission's Rules to authorize subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates*, ET Docket No. 98-206, RM-9147, RM9245, 14 FCC Rcd 1131, 1138 ¶¶ 8-9 (1998).

<sup>9</sup> See Public Notice, *International Bureau Satellite Policy Branch Information: Cut-off Established for Additional Applications and Letters of Intent in the 12.75-13.25 GHz*,

Having shown that they can share the spectrum with DBS and with each other, the eight NGSO-FSS applicants are on the Commission's traditional path towards being granted licenses without competitive bidding. Having demonstrated in the very same proceeding that it, too, can share the spectrum with DBS and with all the NGSO-FSS operators, Northpoint should be granted licenses in the same way. To single Northpoint out at this late date and subject it to an auction is arbitrary and unjustifiable. Simple fairness requires that the Commission finish what it has started and grant Northpoint's licenses under the same procedures used to grant the licenses to others who submitted applications in the filing window established for this frequency band.<sup>10</sup>

Furthermore, because the whole point of Northpoint's technology is to re-use *satellite spectrum*, the ORBIT Act's ban on auctioning satellite spectrum should apply.<sup>11</sup> There is no doubt that NGSO-FSS is an international or global satellite service, and there is no doubt that the ORBIT Act prohibits the auctioning of spectrum used to provide such a service. Hence, the Commission has no plans to auction NGSO-FSS licenses. But there is also no doubt that Northpoint uses the *very same spectrum* that is used for

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*13.75-14.5 GHz, 17.3-17.8 GHz and 10.7-12.7 GHz Frequency Bands*, Report No. SPB-141, 1998 WL 758449 (rel. Nov. 2, 1998) ("*Ku-Band Cut-Off Notice*").

<sup>10</sup> The public-interest criteria set forth in the Communications Act likewise oblige the Commission to take steps to avoid a spectrum auction in the present circumstances by taking steps to avoid accepting mutually exclusive applications for filing. *See* 47 U.S.C. § 309(j)(6)(E); *id.* § 309(j)(3); Northpoint Comments at 22-25.

<sup>11</sup> *See* Open-Market Reorganization for the Betterment of International Telecommunications Act, Pub. L. No. 106-180, § 3, 114 Stat. 48, 57 (2000) ("*ORBIT Act*") (codified at 47 U.S.C. § 765f); *see also* Northpoint Comments at 14-16.

international or global satellite service. Accordingly, the ORBIT Act's prohibition on auctions extends to terrestrial licenses as well.<sup>12</sup>

The commenters who favor a spectrum auction have for the most part spent no money, no time, and no effort in developing, testing, and gaining approval for technology that makes ubiquitous sharing of the 12 GHz band possible. Indeed, even the SBCA – notably Northpoint – acknowledges that the Commission's decision to authorize terrestrial service was made possible by data “provided primarily, if not exclusively, by Northpoint.”<sup>13</sup> Many commenters therefore hope to free-ride on Northpoint's technology and its regulatory efforts.

The comments filed by Boeing are perhaps the most shameless in expressing a desire to appropriate Northpoint's invention for others' use: Boeing proposes that the Commission should allow new terrestrial use of the 12 GHz band subject to the “requirement that Northpoint and its affiliates make their patents available to all other parties on reasonable terms and conditions without unfair discrimination.”<sup>14</sup> Boeing does not say where the Commission is supposed to get authority to effectuate this kind of taking of Northpoint's property.<sup>15</sup> Furthermore, Boeing's proposal rests on the mistaken

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<sup>12</sup> Although DBS licenses using this spectrum were auctioned in the past, those auctions took place before the passage of the ORBIT Act. Northpoint believes that the ORBIT Act prohibits any future auctions of DBS spectrum in the 12 GHz band.

<sup>13</sup> SBCA Comments at 5; *see also* SBCA Petition for Reconsideration at 2 (conceding that Commission's decision “appears to be based solely upon test data supplied by Northpoint”); DirecTV Petition for Reconsideration at 3 (noting that Commission's determination to introduce terrestrial service “is based primarily upon the proposals of Northpoint Technology, Ltd.”).

<sup>14</sup> Boeing Comments at 44.

<sup>15</sup> *Cf. Bell Atlantic Tel. Cos. v. FCC*, 24 F.3d 1441, 1446 (D.C. Cir. 1994) (rejecting suggestion that FCC possesses implicit eminent domain authority, absent express statutory grant).

notion that Northpoint wants the Commission to adopt its technology as some kind of official standard that all terrestrial broadcasters in the 12 GHz band must use, as when the Commission set technical standards for AM stereo equipment and DTV.<sup>16</sup>

In fact, Northpoint wants no such thing; that is one reason Northpoint believes the Commission should grant its licenses with appropriate waivers without creating a new “MVDDS Service” involving specific technical criteria that will artificially constrain future sharing of the band.<sup>17</sup> Later, if SkyTower, for example, ever proves to the Commission’s satisfaction that its experimental stratospheric solar-electric plane can share the band with Northpoint and the other existing and planned DBS and NGSO-FSS users, then it, too, should be eligible for a license with appropriate waivers.<sup>18</sup> But not before.<sup>19</sup>

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<sup>16</sup> See Boeing Comments at 42.

<sup>17</sup> See Northpoint Comments at 31; see also Joint Broadcasters Comments at 4 (“The Commission proposes to unnecessarily complicate and delay resolution of Northpoint’s waiver requests and license applications by creating a new wireless service that would require a lengthy rulemaking to establish service rules followed by an application period and license auction.”)

<sup>18</sup> See Northpoint Comments at 31; see also Joint Broadcasters Comments at 7 (“If other terrestrial competitors eventually develop, then they can make the same applications and the same showings of technical compatibility as Northpoint, and the Commission may consider them on a case-by-case basis.”)

<sup>19</sup> At present, MDS America (“MDS”) does not present a more compelling case than SkyTower. MDS did not participate in negotiations with NGSO-FSS operators and the International Bureau regarding spectrum sharing, and it did not respond to the Commission’s first notice of proposed rulemaking in this docket. MDS has not filed a license application with the Commission or submitted its technology to MITRE for testing. Even in its current filing MDS has not provided any technical analysis or other information to support its claim that it can operate co-channel with DBS systems. While Appendix 2 of the MDS comments provides a listing of satellite services and MDS locations, there is no specific correlation between the listed locations and services. For example, the “IHUG” internet service is listed under “Australia/New Zealand Overlap,” yet the IHUG service is only offered in Auckland, more than 1,000 miles from the nearest Australian area serviced by the listed satellites. The apparent geographic separation of

The obligation to ensure that all applicants are technologically qualified to share spectrum with other users is not just a practical necessity for the Commission, it is a specific legal duty. Congress passed a law on December 21, 2000, requiring the Commission to provide for independent testing of “any terrestrial service technology proposed by any entity that has filed an application to provide terrestrial service” in the 12 GHz band.<sup>20</sup> Anyone wanting to provide terrestrial service in the 12 GHz band must come forward with technology to be independently tested. The Commission has selected the MITRE Corporation to perform the required testing. Yet only Northpoint has come forward with technology for testing. Neither Pegasus nor Satellite Receivers has made equipment available to MITRE for testing,<sup>21</sup> nor has MDS America or SkyTower or AT&T or Boeing. In short, all the other would-be applicants are at best untested and at worst technologically bankrupt.

The Commission cannot afford the luxury of waiting to see whether other technologies emerge and can prove themselves. Federal law requires that the Commission issue Northpoint’s licenses quickly. The Commission has already missed both the general one-year deadline for approving new technologies and the specific November 30, 2000, deadline for issuing licenses for the provision of local television

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MDS’s terrestrial service from satellite services using the same bands raises doubts about MDS’s ability to share spectrum ubiquitously with DBS and NGSO-FSS systems.

<sup>20</sup> Launching Our Communities’ Access to Local Television Act of 2000, Pub. L. No. 106-553, App. B, Tit. X, § 1012(a), 114 Stat. 2762, 2762A-128, 2762A-141.

<sup>21</sup> Satellite Receivers even went so far as to suggest that MITRE should establish technical criteria (presumably based on Northpoint’s technology), with which Satellite Receivers would then attempt to comply. But that is not good enough. The point of the law is to see that Satellite Receivers and anyone else wishing to provide terrestrial service in the 12 GHz band can do so without causing harmful interference to incumbent DBS operators. *See* Northpoint Comments at 20

signals to unserved and underserved areas using spectrum already allocated to other uses. Congress wanted these licenses issued quickly in order to enable compliance with the DBS must-carry obligations imposed by the Satellite Home Viewer Improvement Act, and in order to bring much-needed competition to the markets for MVPD and broadband Internet access. The MMTC hits the nail on the head when it notes that “because auctions would further delay low cost broadband video and data services to the public, and particularly to unserved and underserved communities, such auctions are contrary to specific Congressional mandates and the public interest.”<sup>22</sup>

As explained in Thomas Hazlett’s declaration, delay in issuing Northpoint’s licenses means delay in adding a key new competitor to the ossified, oligopolistic markets for MVPD and broadband Internet access. Each year’s delay costs consumers and businesses some two billion dollars.<sup>23</sup> Using spectrum auctions could delay the issuance of licenses for terrestrial service in the 12 GHz band by three years, resulting in lost consumer surplus on the order of perhaps 6 billion dollars.<sup>24</sup> These consumer losses are likely to outweigh by far any revenues or efficiency gains associated with auctions. It is understandable that incumbent cable TV and DBS operators would want to see those billions in their own coffers rather than in the pockets of MVPD and Internet consumers. As discussed below, that entirely comprehensible urge to stifle effective competition manifests itself in the comments filed by satellite and cable companies as a call for unduly restrictive and burdensome technical and other constraints on Northpoint.

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<sup>22</sup> MMTC Comments at 4.

<sup>23</sup> See Hazlett Decl. ¶ 21.

<sup>24</sup> *Id.*

## **II. THE COMMISSION SHOULD NOT ADOPT TECHNICAL OR OTHER OPERATING CONSTRAINTS THAT WILL PREVENT NORTHPOINT'S EMERGENCE AS AN EFFECTIVE COMPETITOR**

One remarkable thing about the satellite operators' comments is that, after first arguing that spectrum sharing is impossible and will destroy their services, the satellite operators then argue that they, too, should be permitted to operate terrestrial services in the 12 GHz band. The vehemence of the satellite operators' opposition to allowing terrestrial broadcasts casts doubt on their intention actually to offer terrestrial service if they were to receive licenses. EchoStar only exacerbates this concern when it dismisses any combined satellite-terrestrial service as "decidedly inferior to cable."<sup>25</sup> Why would the satellite operators want licenses to provide a service they think nobody wants? The auction process itself is a source of considerable delay, as several commenters noted.<sup>26</sup> Moreover, there is a grave danger that, if permitted to win licenses at auction, satellite operators would simply warehouse the spectrum, delaying any build-out as long as possible, and preventing the emergence of effective competition in the meantime.<sup>27</sup>

AT&T's position as the nation's largest cable system operator likewise raises the specter of an anticompetitive motive behind its interest in acquiring licenses for terrestrial 12 GHz service. Even the satellite operators, who are no friends of Northpoint and its innovative technology, recognize that cable's dominant position in the markets for

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<sup>25</sup> EchoStar Comments at ii.

<sup>26</sup> See Northpoint Comments at 2; NITI Comments at 4; MMTC Comments at 4; Joint Broadcasters Comments at 4.

<sup>27</sup> See, e.g., MMTC Comments at 3 ("Once the victimized new kid on the block, the DBS industry has adopted the mantle of powerful incumbent and is seeking to use the Commission to forestall a less expensive, serious competitor.").

MVPD and broadband Internet access gives cable operators like AT&T a strong incentive to hinder development of a new terrestrial pipeline to the home.<sup>28</sup> AT&T's sudden interest in these proceedings after years of silence validates Northpoint's claim to be an effective potential competitor to cable and DBS.<sup>29</sup>

The satellite operators' interest in delay manifests itself in other proposals as well. The satellite operators oppose the issuance of nationwide licenses and would instead issue only one license – in a commercially unattractive location, of course – in order to test yet again whether Northpoint's technology will cause harmful interference.<sup>30</sup> Such a “test” license is nothing more than a transparent attempt to delay the roll-out of Northpoint's competitive service. Northpoint received an experimental test license more than seven years ago. Northpoint has already conducted, over and over again, the tests that the satellite operators are now suggesting. Indeed, further independent testing by the MITRE Corporation is underway right now. The only reason to restrict the issuance of licenses to one rural market is to fatten the coffers of DBS and cable operators.

The satellite operators also advocate various technical restrictions designed to ensure that Northpoint cannot provide a viable service that might put competitive pressure on their operating margins.

For starters, the DBS operators hope to consign Northpoint to some other, inferior

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<sup>28</sup> See EchoStar Comments at 28 (“[C]able operators have a proven incentive to devitalize competition.”); see also Pegasus Comments at 18; DirecTV Comments at 28-29.

<sup>29</sup> It is worth noting that AT&T seemingly rejects the notion of using the 12 GHz band for MVPD services that would compete with its core cable business and instead raises the possibility of using the 12 GHz band for common-carrier-type voice services. See AT&T Comments at 12 & n.36.

<sup>30</sup> See DirecTV Comments at 26-27; SBCA Comments at 7; EchoStar Comments at 20 (“[T]he Commission should . . . start with a single local market that should not be among the nation's 50 largest markets.”)

frequency band, such as the bands allocated to MMDS or LMDS.<sup>31</sup> As explained in the comments of AT&T, the 12 GHz band has particularly favorable transmission characteristics that make it more favorable for spectrum sharing than the lower MMDS wavelengths and more reliable in inclement weather than the higher LMDS wavelengths.<sup>32</sup> Moreover, the 12 GHz band is one of the few bands in which adequate bandwidth is available to provide a commercially viable MVPD offering. The Commission itself has recognized, for example, that the capacity limits of MMDS are “generally not competitive with that of most cable systems.”<sup>33</sup> Perhaps most important, scale economies for both transmission and receiving equipment are available in the 12 GHz band. Northpoint proposes to offer terrestrial service using equipment that is already widely available commercially at attractive price points.<sup>34</sup> By leveraging the scale economies and existing distribution network associated with this equipment, Northpoint can provide service in the 12 GHz band without the crippling capital costs that have hobbled previous “wireless cable” ventures.<sup>35</sup> Hence, contrary to the DBS

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<sup>31</sup> See EchoStar Comments at ii-iii; DirecTV Comments at 4-5.

<sup>32</sup> See AT&T Comments at 11.

<sup>33</sup> Sixth Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 15 FCC Rcd 978, ¶ 86; see also Seventh Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Docket No. 00-132, FCC 01-1, 2001 WL 300715, ¶ 87 (rel. Jan. 8, 2001) (“[I]t appears that most MMDS licenses will not be used in the future to compete in the MVPD market...The MMDS industry is currently transitioning from offering video programming to offering data services.”).

<sup>34</sup> See Northpoint 1999 Comments at 15-17.

<sup>35</sup> See *id.* at 16 and sources cited therein. Other technical factors likewise make the 12 GHz band more economically attractive for terrestrial service than other bands. The Commission has recognized, for instance, that “LMDS requires more transmission towers to cover a given area, increasing LMDS deployment cost. Moreover, LMDS requires cellularization to limit rain attenuation, and the cells are small—five kilometers (3 miles) or less in radius.” See Third Report and Order and Memorandum Opinion and Order,

operators' suggestion, Northpoint is *not* "yet another wireless cable attempt that could be accommodated elsewhere."<sup>36</sup> The Commission has an obligation to promote the efficient use of spectrum,<sup>37</sup> and the scale economies and technical advantages available in the 12 GHz band make it the most efficient place to create new bandwidth through spectrum sharing, in fulfillment of that obligation.

If the DBS operators cannot banish Northpoint to another frequency band, then they want rules providing that Northpoint's terrestrial service should not be allowed to cause any increase in DBS unavailability beyond the 10% increase that NGSO-FSS operations are permitted to cause.<sup>38</sup> In particular, the DBS operators believe that any further increase would somehow be contrary to the ITU's recommendation. But the very title of the ITU's recommendation belies the DBS operators' claim; it is called "Protection of the BSS in the 12 GHz Band and Associated Feeder Links in the 17 GHz Band *from Interference Caused by Non-GSO FSS Systems*."<sup>39</sup> To suggest, as the DBS operators do, that the 10% increase in unavailability was somehow supposed to sweep up every possible source of interference with DBS operations is to misread the record of the

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*Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 15 FCC Rcd 11857, ¶ 27 (2000).

<sup>36</sup> EchoStar Comments at iii; *see also* DirectTV Comments at 4-5.

<sup>37</sup> *See* 47 U.S.C. §§ 151, 157, 303(g), 309(j)(3); *see also, e.g.*, Order, *Aircell, Inc.; Petition Pursuant to Section 7 of the Act, For a Waiver of the Airborne Cellular Rule, or, in the Alternative, for a Declaratory Ruling*, 14 FCC Rcd 806, ¶ 17 (1998) ("[T]he Commission has repeatedly indicated that it is under a statutory mandate to make services available which are in the public interest, convenience and necessity. This mandate includes the public interest obligation to promote the efficient use of spectrum resource, as well as to promote new technologies and make available new services to the public.")

<sup>38</sup> *See* EchoStar Comments at 10-11; DirecTV Comments at 8-11.

<sup>39</sup> Recommendation ITU-R BO. 1444.

ITU's proceedings.<sup>40</sup> As discussed more fully in the technical appendix to these reply comments, nothing in the ITU's recommendation prevents the creation of a separate interference budget for terrestrial broadcasters, particularly since terrestrial fixed services are allocated on a worldwide basis today.<sup>41</sup>

The DBS operators also attempt to saddle Northpoint with an impossible burden by insisting that “transmitters must be designed in such a way that the received interference at *any* potential residence or business location in the area surrounding the [terrestrial] transmitter meet interference criteria *without requiring DBS customer site mitigation.*”<sup>42</sup> Northpoint does not anticipate that its terrestrial signals will cause harmful interference to any DBS subscribers, in part due to transmitter design and location.<sup>43</sup> In the unlikely event that further mitigation should be needed, Northpoint is prepared to perform on-site mitigation at the DBS customer's location during the first 18 months of broadcasting from a given transmitter. Northpoint's obligation to mitigate harmful interference even if such mitigation requires taking on-site measures is a confirmation of DBS's primary allocation. Only because DBS is primary and fixed services in the 12 GHz band have an obligation not to cause harmful interference with DBS is Northpoint prepared to undertake on-site mitigation. If fixed services were truly co-primary with DBS (as they are with NGSO-FSS), then there would be no obligation to mitigate interference even through transmitter design and location, much less through on-site

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<sup>40</sup> See, e.g., Recommendation ITU-R BO.1444, “considering” clause (n) (emphasizing need to “define criteria to protect a network in the BSS and associated feeder links from interference caused by non-GSO FSS systems.”)

<sup>41</sup> See Technical Appendix at 6-7.

<sup>42</sup> DirecTV Comments at 15 (emphasis added).

<sup>43</sup> Cf. *First Report and Order and FNPRM* ¶ 275.

intervention. Yet in a remarkable display of doublespeak, EchoStar argues at some length that Northpoint's willingness to undertake expensive on-site mitigation to protect DBS customers from interference somehow makes DBS secondary to terrestrial services.<sup>44</sup> To appreciate how very wrong that is, one needs simply to note the complaints of the NGSO-FSS operators, who are to operate on a truly co-primary basis with terrestrial broadcasters and therefore have no right to on-site mitigation, but desperately want it.<sup>45</sup> Contrary to the DBS operators' confused arguments, on-site mitigation confirms, rather than undermines, DBS's primary status. The fuss over on-site mitigation is just an excuse by DirecTV and EchoStar to ask for restrictions on Northpoint's transmitter location, design, and output severe enough that Northpoint will not be able to offer an effective competitive service.

Pegasus also wishes to use mitigation as an excuse to hamstring Northpoint's efforts to compete against DBS, but proposes to achieve this goal using economic rather than technical restrictions. Instead of arguing that on-site mitigation should not be allowed, Pegasus says that the DBS operator alone – and not the terrestrial broadcaster – should perform any needed on-site mitigation, yet the terrestrial broadcaster should pay for it all.<sup>46</sup> This would give DBS operators *carte blanche* to run up a competing terrestrial broadcaster's costs. It takes but little imagination to conjure up a bill for a bigger, newer dish that will be less susceptible to interference, with elaborate back and side shielding, and perhaps some shrubbery to camouflage the shield, with many person-hours of billable time spent analyzing the situation and making the suggested changes.

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<sup>44</sup> See EchoStar Comments at 17-20.

<sup>45</sup> See, e.g., Boeing Comments at 30-35.

<sup>46</sup> See Pegasus Comments at 10-11.

Pegasus also proposes a needlessly complex, expensive, and burdensome mitigation program with a roving technician visiting every DBS subscriber within a mitigation zone (presumably at the terrestrial broadcaster's expense).<sup>47</sup> Northpoint strongly supports the Commission's much more reasonable alternative proposal, which would rely on DBS subscriber reports to identify areas in need of on-site mitigation.<sup>48</sup> Pegasus opposes this alternative plan on the ground that "[s]ubscribers are likely to complain only when increased unavailability is noticeably high."<sup>49</sup> Northpoint does not disagree. But, unlike Pegasus, Northpoint believes there is no point in expending resources to root out and mitigate interference that no one notices – except, perhaps, to run up a rival's costs.<sup>50</sup> That is not a goal the Commission should countenance.

Pegasus wishes to prevent Northpoint's technicians from performing on-site mitigation for DBS subscribers because it wants to prevent those technicians from having an opportunity to invite DBS subscribers to switch to Northpoint's terrestrial service.<sup>51</sup> But this argument, too, is flawed. Northpoint will be knocking on DBS customers' doors and inviting them to switch to Northpoint's service regardless whether they have a need for on-site mitigation. Pegasus cannot prevent Northpoint from communicating with DBS subscribers about its services; indeed, sensible economic policy (not to mention the First Amendment) supports that kind of communication. It's called competition.

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<sup>47</sup> See *id.* at 9.

<sup>48</sup> See *First Report and Order and FNPRM* ¶ 271.

<sup>49</sup> Pegasus Comments at 10.

<sup>50</sup> For a more systematic treatment of the appropriate criteria for measuring "harmful interference," including a discussion of why interference must be noticeable to be harmful, see the technical appendix to these reply comments at 2-5.

<sup>51</sup> See Pegasus Technical Supplement Comments at 10-11.

Another way the satellite operators attempt to hobble Northpoint's efforts to provide a competitive service is by choking off its bandwidth. Many commenters agree with Northpoint that 500 MHz is essential to provide a competitive video service with spectrum still available for data offerings.<sup>52</sup> Pegasus wants to subdivide the spectrum into 125 MHz blocks, thereby ensuring that no licensee has adequate bandwidth to challenge DBS's range of offerings.<sup>53</sup> EchoStar, too, proposes to cripple terrestrial services by limiting the bandwidth available to them, but the bandwidth restriction is only the beginning of EchoStar's audacious proposal. EchoStar firsts want to set aside "no less than 250 MHz" for DBS licensees (thus ensuring, once again, that competing terrestrial services will not be able to offer a full palette of competing services).<sup>54</sup> That EchoStar does not plan to use this bandwidth productively itself is demonstrated by its willingness to further subdivide the spectrum set aside in this way between itself and DirecTV.<sup>55</sup> EchoStar thinks it should get this spectrum *without an auction* and, indeed, without any payment whatsoever.<sup>56</sup> With respect to the remaining spectrum, EchoStar wants not only to be able to bid at auction but also to benefit from a 45% discount for

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<sup>52</sup> See, e.g., AT&T Comments at 16; Satellite Receivers Comments at 4.

<sup>53</sup> See Pegasus Comments at 15. Pegasus also proposes issuing licenses for geographic areas smaller than DMAs. See *id.* at 14. Northpoint continues to support the use of DMAs for the reasons given in its opening comments. See Northpoint Comments at 32; see also *First Report and Order and FNPRM* ¶¶ 284-286. In particular, the use of DMAs would facilitate the mandatory carriage of local TV stations, as advocated in the comments of, among others, the Association of America's Public Television Stations.

<sup>54</sup> See EchoStar Comments at 29-30.

<sup>55</sup> *Id.*

<sup>56</sup> It interesting to note in connection with this proposal that EchoStar has not paid at auction for a license that it is actually using. Although EchoStar won its license at 148° W. L. at auction, it is not (to Northpoint's knowledge) making use of that orbital slot. And although EchoStar is making use of its orbital slot at 110° W. L., it bought that slot from MCI; the proceeds from that purchase did not flow into the Government's coffers.

itself.<sup>57</sup> Then, incredibly, it wants to receive a *payment* out of the auction proceeds on top of all that to compensate it for “the cost of relocating or disrupting” its operations.<sup>58</sup> Of course, the whole point about spectrum sharing is that incumbents like EchoStar *will not have to relocate or disrupt their operations*. That is the magic that Northpoint’s technology makes possible.

But the most telling detail about EchoStar’s tedious recitation of need for compensation is that its argument is directed exclusively at Northpoint. EchoStar does not claim that it cannot share spectrum with the NGSO-FSS operations; in fact, it cheerfully agreed to have its NGSO-FSS buddies generate a 10% increase in its unavailability. EchoStar has neither accused the NGSO-FSS operators of trampling on its rights nor asked for a single dime in compensation from them. Its comments have only one apparent goal: to keep Northpoint from ever providing a competitive MVPD and data offering that would disturb DBS’s cozy oligopoly with the cable providers.

### **III. COMMENTS REGARDING TECHNICAL CRITERIA**

The technical appendix accompanying these comments sets forth Northpoint’s position on the important technical issues associated with successful sharing of the 12

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<sup>57</sup> See EchoStar Comments at 30.

<sup>58</sup> See EchoStar Comments at 30. Earlier in its comments, EchoStar bizarrely suggests that it might be entitled to additional compensation *from the Government* for damage to its “expectation” of making terrestrial use of the 12 GHz band under its existing DBS license. The source of EchoStar’s “expectation” appears to be a recent Commission policy statement concerning the flexible use of spectrum, which EchoStar supposes to have conferred new rights upon it. See EchoStar Comments at 10 & n.14 (citing Policy Statement, *Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets*, FCC 00-401, 2000 WL 1760080 (rel. Dec. 1, 2000)). It goes without saying that the policy statement did no such thing. In any event, EchoStar has never indicated any plans or capability for using the spectrum terrestrially, much less demonstrated that it possesses terrestrial broadcasting technology that will not cause harmful interference to DBS broadcasts.

GHz band among DBS, NGSO-FSS, and terrestrial users. In briefest terms, Northpoint acknowledges that it has an obligation not to cause harmful interference to incumbent DBS operations, and it believes that equivalent power flux density (EPFD) is the appropriate metric to guarantee Northpoint's compliance with this obligation.

Encouragingly, DirecTV apparently agrees that EPFD is the required metric. Northpoint and DirecTV even agree on the general method for calculating EPFD, although they disagree over the assumptions that should be used as inputs to this method and the amount of interference that can properly be considered harmful.

With regard to sharing spectrum with NGSO-FSS operations, Northpoint generally supports the Commission's proposals with a few modifications. Northpoint strongly opposes the draconian restrictions on its service envisioned by Boeing and Skybridge. The Commission is proposing that NGSO-FSS be allocated more than six times more spectrum than Northpoint: 3000 MHz to NGSO-FSS; 500 MHz to Northpoint. NGSO-FSS can use the 2,500 MHz of spectrum in which Northpoint will not be operating to avoid sharing problems. Therefore, the service rules should facilitate Northpoint's prompt deployment rather than constrain it with unnecessary restrictions to accommodate ever-changing NGSO-FSS business plans.

## CONCLUSION

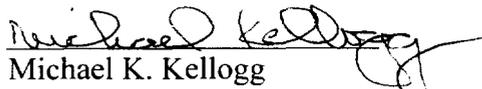
The Commission should grant the pending license applications of Northpoint's Broadwave affiliates, including their requests for waivers to permit terrestrial, point-to-multipoint video services under the existing allocation for fixed services in the 12 GHz band.

Respectfully submitted,

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April 5, 2001

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